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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,419	09/30/2005	Claudio Borean	09952.0003	4050

22852 7590 06/22/2009

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EXAMINER	
AGHDAM, FRESHTEH N	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
06/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,419	BOREAN ET AL.	
	Examiner	Art Unit	
	FRESHTEH N. AGHDAM	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-25,27-31 and 33-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-25, 27-31, and 33-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 23-25, 27-31, and 33-43 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Claims 42-44 are objected to because of the following informalities:

As to claims 42-44, the phrase"loadable into" should be removed in order to render said claims definite. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 42-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 42-44 include subject matter "A computer readable medium encoded with a computer program product directly loadable into an internal memory of a computer, the computer program product including software code portions performing the method of ...", in which at least one of the

"computer readable medium" and "internal memory" was not described in the original disclosure of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 23-25, 27-31, and 33-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant application's disclosed prior art.

As to claims 23, 25, 28-29, 34, the instant application's disclosed prior art teaches a method of and/or an apparatus for managing a transmission system wherein a plurality of sets of samples is subject to an integral transform (e.g. IFFT) transmitted in said integral transformed format over a millimeter-wave carrier (fig. 1, pg. 5, lines 14-21) and subject to a complementary integral transform (FFT) to reconstruct said plurality of sets of samples in the receiver (pg. 7, lines 22-26), comprising: including in said system a plurality of terminals (pg. 1, lines 20-27; pg. 9, lines 16-35); assigning to said terminals respective non-overlapping sets of samples or positions within said plurality of sets of samples (pg. 9, lines 16-35); and transmitting a set of non-zero samples pertaining to a first terminal of said plurality of terminals by inserting said samples in the respective position assigned to said first terminal (pg. 9, lines 16-35). The instant application's disclosed prior art does not expressly teach that the sample sets are non-overlapping

(e.g. the plurality of sample sets do not occupy the same positions/subspace in the buffer); and transmitting, simultaneously, first and second sets of non-zero samples pertaining to the first and second terminals. One of ordinary skill in the art would recognize that it is obvious and/or a matter of design choice to assign different/distinct (non-overlapping) subspaces in a buffer to different sets of samples belonging to different terminals in order to transmit the first and second non-zero samples simultaneously (see references cited under conclusionsince) by doing so the signal processing speed increases, on the other hand, if the same subspace in a buffer is assigned to different sample sets belonging to different terminals the signal processing speed decreases but the other subspaces in the buffer is reserved for other tasks. Therefore, it would have been obvious to one of ordinary skill in the art to modify the teaching of the instant application's disclosed prior art to assign different/distinct (non-overlapping) subspaces in a buffer to different sets of samples belonging to different terminals instead of assigning a single subspace in the buffer to different sample sets belonging to different terminals for the reason stated above.

As to claims 24 and 30, the instant application’s disclosed prior art further teaches including at least one further terminal adapted for exchanging samples with said plurality of terminals and causing said at least one further terminal to subject to at least one of said integral transform and said complementary integral transform a plurality of sets of samples including at least two overlapping sets of non-zero samples pertaining to at least two of the plurality of terminals (pg. 13, lines 12-21).

As to claims 27, 33, 36-37, 40-41, the instant application's disclosed prior art teaches transmitting said samples in said integral transformed format over a millimeter-wave carrier (pg. 2, lines 4-12).

As to claim 31, the instant application's disclosed prior art teaches at least one further terminal is an access point of a WLAN network (pg. 2, lines 13-16; pg. 13, lines 12-21).

As to claim 35, the instant application's disclosed prior art teaches allocating at least a single set of non-zero samples in a single respective set of positions of said buffer, which is indicative of said transmitter terminal (pg. 1, lines 20-27; pg. 9, lines 16-35).

As to claims 38-39, the instant application's disclosed prior art teaches a receiver for receiving samples transmitted in said integral transformed format (pg. 1, lines 20-27; pg. 9, lines 16-35); a complementary integral transform module for subjecting said sets of samples to a complementary integral transform and reconstructing therefrom said at least one set of nonzero samples (pg. 1, lines 20-27; pg. 9, lines 16-35). The instant application's disclosed prior art does not expressly teach a buffer for receiving said plurality of sets of samples (means 43; pg. 9, lines 16-35); and allocating at least one set of the nonzero samples to the respective positions of said buffer. However, one of ordinary skill in the art would recognize that employing a buffer complementary to the buffer 43 employed in the transmitter and allocating the set of nonzero samples to a subspace of the buffer is obvious and/or well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to employ a buffer and allocate the set of

received nonzero samples to the respective subspace of the receive buffer (complementary to the transmit buffer) in order to further process the received signal and be compatible with the transmitter device.

As to claims 42-44, one of ordinary skill in the art would recognize that it is obvious and/or well known in the art to perform various signal processing tasks using a computer program product loadable in the internal memory of a computer and including software code portions. Therefore, it would have been obvious to one of ordinary skill in the art to use a computer program product to perform various signal processing tasks.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Binder (US 2008/0292073) see paragraph 57 and Baker JR. et al (US 2003/0091012) see paragraph 6.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. N. A./

Examiner, Art Unit 2611

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611